Complete Summary

GUIDELINE TITLE

Guidelines for quality standards for immunization.

BIBLIOGRAPHIC SOURCE(S)

Gardner P, Pickering LK, Orenstein WA, Gershon AA, Nichol KL. Guidelines for quality standards for immunization. Clin Infect Dis 2002 Sep 1;35(5):503-11. [48 references] PubMed

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Hepatitis B
- Diphtheria
- Tetanus
- Pertussis
- Haemophilus influenzae type b infection
- Poliomyelitis
- Measles
- Mumps
- Rubella
- Varicella
- Pneumococcal disease
- Influenza
- Hepatitis A

GUIDELINE CATEGORY

Management
Prevention

CLINICAL SPECIALTY

Infectious Diseases

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To provide assistance to clinicians who make decisions on providing immunizations to infants, children, adolescents, and adults
- To aid in the achievement of higher immunization rates among children and adults and, as a result, to reduce the incidence and public health burden of vaccine-preventable diseases

TARGET POPULATION

Healthy infants, children, adolescents, and adults

Note: These standards pertain to the routine use of universally recommended vaccines. More comprehensive sources are available for recommendations regarding immunization of persons who belong to specific groups (e.g., international travelers, health care providers, veterinarians, and prison inmates) or who have medical conditions (e.g., asplenia; human immunodeficiency virus [HIV] infection; cancer or other immunosuppressive conditions; diabetes mellitus; renal failure; or compromised cardiac or pulmonary function).

INTERVENTIONS AND PRACTICES CONSIDERED

Immunizations with the following vaccines:

1. Hepatitis B
2. Diphtheria and tetanus toxoids and pertussis (DTP/DTaP)
3. Haemophilus influenzae type b (Hib)
4. Inactivated poliovirus (IPV)
5. Measles, mumps, and rubella (MMR)
6. Varicella
7. Pneumococcal conjugate
8. Hepatitis A
9. Influenza

MAJOR OUTCOMES CONSIDERED

- Immunization rates for various vaccines and age groups
- Maximum number of cases and number of provisional cases of selected vaccine-preventable diseases; percentage reduction attributable to vaccination

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Information on costs and benefits derived from the review of cost analyses is shown in table 1 in the original guideline document.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The document has been subjected to external review by peer reviewers as well as by the Practice Guidelines Committee, and it was approved by the Infectious Diseases Society of America (IDSA) Council.

Guidelines and standards for child, adolescent, and adult immunization practices are based on recommendations by other major organizations in both the public and private sectors of medicine including the U.S. Department of Health and Human Services, the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), and the American College of Physicians-American Society of Internal Medicine (ACP-ASIM).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The Infectious Diseases Society of America (IDSA) endorses use of the following immunizations on the basis of current immunization recommendations in the United States for healthy infants, children, adolescents, and adults. Immunizations for people beginning at birth through 18 years of age include hepatitis B; diphtheria and tetanus toxoids and pertussis; Haemophilus influenzae type b; inactivated poliovirus (IPV); measles, mumps, and rubella (MMR); varicella; pneumococcal conjugate; hepatitis A, in selected states and regions and for high-risk groups; and influenza, for people with certain risk factors. All adults should be immune to measles, mumps, rubella, tetanus, and diphtheria; people $\geq$50 years of age or in groups at high risk for infection should receive annual influenza immunizations; and people 65 years of age or in high-risk groups should receive pneumococcal vaccine. Adults who are susceptible to hepatitis A, hepatitis B, varicella, and/or meningococcal disease should be given appropriate immunizations if they are at special risk for exposure to these agents.

Vaccine Standards

Children

Notice from the National Guideline Clearinghouse (NGC) and the Infectious Disease Society of America (IDSA): On March 2, 2004, the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP), issued temporary recommendations to suspend routine use of both the third and fourth doses of pneumococcal conjugate vaccine (PCV7; Prevnar®). Children at increased risk of severe disease should continue to receive the full, routine, four-dose series. The recommendations were issued in response to a low vaccine supply. For more information, refer to the CDC Web site.

The standard for immunization of children and adolescents is the Recommended Childhood Immunization Schedule, United States (see table below) approved each year by the Advisory Committee on Immunization Practices (ACIP) of the Centers

for Disease Control and Prevention (CDC), the American Academy of Pediatrics, and the American Academy of Family Physicians (Centers for Disease Control and Prevention [CDC], 2002a). Immunizations that should be given routinely are those against hepatitis B; diphtheria, tetanus, and pertussis (DTP/DTaP); Haemophilus influenzae type b (Hib); poliomyelitis; measles, mumps, nd rubella (MMR); varicella; and Streptococcus pneumoniae. In addition, hepatitis A vaccine is recommended for use in selected states and regions, and influenza vaccine is recommended for children with certain high-risk conditions. The specific goal is ≥90% immunization rates for persons age 2 years for the recommended vaccines in the schedule. Approximately 80% of immunizations recommended for children are scheduled in the first 2 years of life. For adolescents, vaccines should be given at 11 to 12 years of age, in accordance with recommendations noted previously (CDC, 2002a; American Academy of Pediatrics, 2000). Children and adolescents who are at increased risk for influenza, hepatitis A, invasive pneumococcal infection, and invasive meningococcal infection should be given appropriate immunizations (CDC, 2001; CDC, 1999; CDC, 2000a; CDC, 2000b; CDC, 1997a).

Recommended Childhood Immunization Schedule, United States, January-December 2002

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	2 r o
Hepatitis B[1]	Hep B # 1 only if mother HBsAg(-)								
		Hep B #2			Hep B #3				
Diphtheria, Tetanus, Pertussis[2]			DTaP	DTaP	DTaP		DTaP		
Haemophilus influenzae Type b[3]			Hib	Hib	Hib	Hib			
Inactivated Polio[4]			IPV	IPV	IPV				
Measles-Mumps-Rubella[5]						MMR #1			
Varicella[6]						Varicella			
Pneumococcal[7]			PCV	PCV	PCV	PCV			
Vaccines below this line are for selected populations									
Pneumococcal[7]									

Hepatitis A[8]									
Influenza[9]					Influenza (y				

Abbreviations: Hep B, hepatitis B; DTaP, diphtheria, tetanus, acellular pertussis; Hib, Haemophilus influenzae type b; IPV, inactivated polio vaccine; MMR, measles, mumps, rubella; PCV, pneumococcal conjugate vaccine (PCV); PPV, pneumococcal polysaccharide vaccine

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2001, for children through age 18 years. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

1. Hepatitis B vaccine (Hep B). All infants should receive the first dose of hepatitis B vaccine soon after birth and before hospital discharge; the first dose may also be given by age 2 months if the infant's mother is HBsAg-negative. Only monovalent hepatitis B vaccine can be used for the birth dose. Monovalent or combination vaccine containing Hep B may be used to complete the series; four doses of vaccine may be administered if combination vaccine is used. The second dose should be given at least 4 weeks after the first dose, except for Haemophilus influenzae type b (Hib)-containing vaccine which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 6 months.

   Infants born to HBsAg-positive mothers should receive hepatitis B vaccine and 0.5 mL hepatitis B immune globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1-2 months and the vaccination series should be completed (third or fourth dose) at age 6 months.

   Infants born to mothers whose HBsAg status is unknown should receive the first dose of the hepatitis B vaccine series within 12 hours of birth. Maternal blood should be drawn at the time of delivery to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive hepatitis B immune globulin as soon as possible (no later than age 1 week).

2. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15-18 months. Tetanus and diphtheria toxoids (Td)

is recommended at age 11-12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

3. Haemophilus influenzae type b (Hib) conjugate vaccine. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4 or 6 months, but can be used as boosters following any Hib vaccine.
4. Inactivated polio vaccine (IPV). An all-IPV schedule is recommended for routine childhood polio vaccination in the United States. All children should receive four doses of IPV at ages 2 months, 4 months, 6-18 months, and 4-6 years.
5. Measles, mumps, and rubella vaccine (MMR). The second dose of measles, mumps, rubella is recommended routinely at age 4-6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and that both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by the 11-12 year old visit.
6. Varicella vaccine. Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children, i.e. those who lack a reliable history of chickenpox. Susceptible persons aged ≥13 years should receive two doses, given at least 4 weeks apart.
7. Pneumococcal vaccine. The heptavalent pneumococcal conjugate vaccine (PCV) is recommended for all children age 2-23 months. It is also recommended for certain children age 24-59 months. Pneumococcal polysaccharide vaccine (PPV) is recommended in addition to pneumococcal conjugate vaccine for certain high-risk groups. See MMWR 2000;49(RR-9):1-35.
8. Hepatitis A vaccine. Hepatitis A vaccine is recommended for use in selected states and regions, and for certain high-risk groups; consult your local public health authority. See MMWR 1999;48(RR-12):1-37.
9. Influenza vaccine. Influenza vaccine is recommended annually for children age ≥6 months with certain risk factors (including but not limited to asthma, cardiac disease, sickle cell disease, human immunodeficiency virus (HIV), and diabetes; see MMWR 2001;50(RR-4):1-44), and can be administered to all others wishing to obtain immunity. Children aged ≤12 years should receive vaccine in a dosage appropriate for their age (0.25 mL if age 6-35 months or 0.5 mL if aged ≥3 years). Children aged ≤8 years who are receiving influenza vaccine for the first time should receive two doses separated by at least 4 weeks.

For additional information about vaccines, vaccine supply, and contraindications for immunization, please visit the National Immunization Program Website at www.cdc.gov/nip or call the National Immunization Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Approved by the Advisory Committee on Immunization Practices (www.cdc.gov/nip/acip), the American Academy of Pediatrics (www.aap.org), and the American Academy of Family Physicians (www.aafp.org).

Adults

The standards for adult immunization practices are based on recommendations from the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, the American College of Physicians-American Society for Internal Medicine (ACP-ASIM), the American Academy of Family Physicians (AAFP), and other national organizations (see Table below) (CDC, 2002b; National Vaccine Advisory Committee and the Ad Hoc Working Group for the Development of Standards for Adult Immunization Practices, in press).

All adults should be immune to measles, mumps, rubella, tetanus, and diphtheria. All adults ≥65 years of age and younger persons in high-risk groups should receive the pneumococcal vaccine (CDC, 1997a), and people ≥50 years of age and younger people in high-risk groups should receive annual influenza immunization (CDC, 2001). The goals for pneumococcal and influenza vaccine are to achieve immunization rates of ≥90% among all adults aged ≥65 years. Adults who are susceptible to hepatitis A, hepatitis B, varicella, and/or meningococcal disease should be immunized appropriately if they are at high risk for exposure to these agents.

Recommended Adult Immunizations Schedule, United States, 2002

<table>
<tr><td>Vaccine</td><td colspan="3">Age</td></tr>
<tr><td></td><td>19-49 years</td><td>50-64 years</td><td>65 years and older</td></tr>
<tr><td>Tetanus, diphtheria[a]</td><td colspan="3">1 dose booster every 10 years[b]</td></tr>
<tr><td>Influenza</td><td>1 dose annually for persons with medical and occupational indications, or household contacts of persons with indications[c]</td><td colspan="2">1 annual dose</td></tr>
<tr><td>Pneumococcal (polysaccharide)</td><td colspan="2">1 dose for persons with medical or other indications (1 dose revaccination for immunosuppressive conditions)[d, e]</td><td>1 dose for unvaccinated persons[d]
1 dose revaccination[e]</td></tr>
<tr><td>Hepatitis B[a]</td><td colspan="3">3 doses (0, 4 weeks, 6 months) for persons with medical, behavioral, occupational, and other indications[f]</td></tr>
<tr><td>Hepatitis A</td><td colspan="3">2 doses (0, 6 to 12 months) for persons with medical and other indications[g]</td></tr>
</table>

MMR[a](measles, mumps, rubella)	1 dose if measles, mumps, or rubella vaccination history is unreliable; 2 doses for persons with occupational, geographic, and other indications[h]		
Varicella[a]	2 doses (0, 4 to 8 weeks) for persons who are susceptible[i]		
Meningococcal (polysaccharide)	1 dose for persons with medical, geographic, or occupational indications[j]		

Schedule indicates the recommended age groups for routine administration of currently licensed vaccines for persons aged ≥19 years. Licensed combination vaccines may be used whenever any component of combination is indicated and vaccine´s other components are not contraindicated. Providers should consult the manufacturers´ package inserts for detailed recommendations. Please report all significant postvaccination reactions to Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing VAERS reports are available at 800-822-7967 or from the VAERS Web site. Approved by Advisory Committee on Immunization Practices (ACIP) and accepted by American College of Obstetricians and Gynecologists. Additional information about the vaccines listed here and contraindications for immunization is available at the National Immunization Program Web site, or at the National Immunization Hotline, 800-232-2522 (in English) or 800-232-0233 (in Spanish).

[a]Covered by Vaccine Injury Compensation Program. Information on how to file a claim is available at 800-338-2382 or from www.hrsa.gov:80/osp/vicp/. To file a claim for vaccine injury, write the US Court of Federal Claims, 717 Madison Place, NW, Washington, DC 20005 (202-219-9657).

[b]Tetanus and diphtheria vaccine (Td). Primary series for adults in 3 doses; doses 1 and 2 are given ≥4 weeks apart, and the third dose is given 6 to 12 months after the second. Administer 1 dose if the person had received the primary series and the last vaccination was ≥10 years earlier (the American College of Physicians Task Force on Adult Immunization and Infectious Diseases Society of America's Guide for Adult Immunization, 3rd ed. 1994, provides the following as an alternative booster policy: completion of primary immunization series with Td followed by single booster at the age of 50 years for persons who have completed full pediatric series, including teenage and young adult booster) (CDC, 1991).

[c]Influenza vaccine. Medical indications: patients with chronic disorders of cardiovascular or pulmonary systems including asthma, chronic metabolic diseases including diabetes mellitus, renal dysfunction, hemoglobinopathies, and immunosuppression (including that caused by medications or human

immunodeficiency virus [HIV]); those requiring regular medical follow-up or hospitalization during preceding year; and women who will be in the second or third trimester of pregnancy during influenza season. Occupational indications: health care workers and community service workers. Other indications: residents of nursing homes and other long-term care facilities, persons likely to transmit influenza (in-home care givers to persons with medical indications, household contacts and out-of-home care givers of children ≤23 months of age or children with asthma or other indicator conditions for influenza vaccination, and household members and care givers of elderly persons and persons with high-risk conditions), and anyone who wishes to be vaccinated.

[d]Pneumococcal polysaccharide vaccine. Medical indications: chronic disorders of pulmonary system (excluding asthma), cardiovascular diseases, diabetes mellitus, chronic liver diseases including liver disease as result of alcohol abuse (e.g., cirrhosis), chronic renal failure or nephrotic syndrome, functional or anatomic asplenia (e.g., sickle cell disease or splenectomy), immunosuppressive conditions (e.g., congenital immunodeficiency, HIV infection, leukemia, lymphoma, multiple myeloma, Hodgkin disease, generalized malignancy, and organ or bone marrow transplantation), and chemotherapy with alkylating agents, antimetabolites, or long-term systemic corticosteroids. Geographic or other indications: Alaska natives and certain American Indian populations. Other indications: residents of nursing homes and other long-term care facilities (CDC, 1990).

[e]Revaccination with pneumococcal polysaccharide vaccine. One-time revaccination after 5 years for persons with chronic renal failure or nephrotic syndrome, functional or anatomic asplenia (e.g., sickle cell disease or splenectomy), immunosuppressive conditions (e.g., congenital immunodeficiency, HIV infection, leukemia, lymphoma, multiple myeloma, Hodgkin disease, generalized malignancy, and organ or bone marrow transplantation), and chemotherapy with alkylating agents, antimetabolites, or long-term systemic corticosteroids. For persons aged ≥65 years, 1-time revaccination if they were vaccinated ≥5 years previously and were aged ≤65 years at time of primary vaccination (CDC, 1997a).

[f]Hepatitis B virus (HBV) vaccine. Medical indications: patients with chronic liver disease, hemodialysis patients, and patients who receive clotting factor concentrates. Occupational indications: health care workers and public safety workers who have exposure to blood in workplace and persons in training in schools of medicine, dentistry, nursing, laboratory technology, and other allied health professions. Behavioral indications: injection drug users, persons at increased risk of sexually transmitted HBV infections, persons with >1 sex partner in previous 6 months, persons with recently acquired sexually transmitted disease (STD), all clients in sexually transmitted disease clinics, and men who have sex with men. Other indications: household contacts and sex partners of persons with chronic HBV infection, family members of adoptees from countries with intermediate or high prevalence of chronic HBV infection who are positive for HBV surface antigen, clients and staff of institutions for developmentally disabled, international travelers to countries with high or intermediate prevalence of chronic HBV infection for ≥6 months, and inmates of correctional facilities (CDC, 1990) (www.cdc.gov/travel/diseases/hbv.htm).

[g]Hepatitis A virus (HAV) vaccine. Medical indications: persons with clotting factor disorders or chronic liver disease. Behavioral indications: men who have sex with men and users of injection and noninjection illegal drugs. Occupational and other indications: persons working with HAV-infected primates or with HAV in a research laboratory setting and persons traveling to or working in countries with high or intermediate endemicity of HAV (CDC, 1996a) (www.cdc.gov/travel/diseases/hav.htm).

[h]Measles-mumps-rubella vaccine (MMR). Measles component: adults born before 1957 may be considered immune to measles. Give 2 doses for adults born after 1956 without vaccination history, persons vaccinated with killed measles virus vaccine 1963 to 1969, students in postsecondary education institutions, health care workers, community service workers, and susceptible international travelers to countries where measles is endemic. Mumps component: 1 dose should be adequate. Rubella component: 1 dose to women whose rubella vaccination history is unreliable, and counsel women to avoid becoming pregnant for 4 weeks after vaccination. For women of childbearing age, regardless of birth year, routinely determine rubella immunity, and counsel regarding congenital rubella syndrome. Do not vaccinate pregnant women or those planning to become pregnant in the next 4 weeks; if the person is pregnant and susceptible, vaccinate as early in postpartum period as possible (CDC, 1998).

[i]Varicella vaccine. Recommended for all persons who do not have reliable clinical history of varicella-zoster virus (VZV) infection or serological evidence of VZV infection. Special emphasis should be given to health care workers and family contacts of immunocompromised persons, those who live or work in environments where transmission is likely (e.g., teachers of young children, day care employees, and residents and staff in institutional settings), persons who live and work in crowded environments (e.g., college students, inmates and staff of correctional institutions, and military personnel), adolescents and adults living in households with children, women who are not pregnant but who may become pregnant in future, and international travelers who are not immune to infection. Note that $\geq$90% of US-born adults are immune to VZV. Do not vaccinate pregnant women or those planning to become pregnant in the next 4 weeks; if the person is pregnant and susceptible, vaccinate as early in postpartum period as possible (CDC, 1999; CDC, 1996b).

[j]Meningococcal vaccine (quadrivalent polysaccharide for serogroups A, C, Y, and W-135). Medical indications: adults with terminal complement component deficiencies and anatomic or functional asplenia. Occupational or other indications: counsel college freshmen, especially those who live in dormitories, regarding meningococcal disease and vaccine so that they can make an educated decision about receiving vaccination; travelers to countries in which disease is hyperendemic or endemic (e.g., "meningitis belt" of sub-Saharan Africa, Mecca, and Saudi Arabia for Hajj). Revaccination at 3 to 5 years may be indicated for persons at high risk for infection (e.g., those residing in areas of endemicity) (CDC, 1997b; CDC, 1997c).

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

This Infectious Disease Society of America guideline is a summary of evidence-based guidelines previously developed by national organizations. A standard ranking system was used to determine the strength of the recommendations, and the quality of evidence cited in the literature was reviewed for each guideline.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Prevention of infectious diseases
    - Hepatitis B
    - Diphtheria
    - Tetanus
    - Pertussis
    - Haemophilus influenzae type b
    - Poliomyelitis
    - Measles
    - Mumps
    - Rubella
    - Varicella
    - Pneumococcal disease
    - Influenza
    - Hepatitis A
- Higher immunization rates among children and adults, resulting in the reduction of the incidence and public health burden of vaccine-preventable diseases
- Overcoming the following barriers to successful immunization of children and adults:
    - Inadequate access to healthcare services
    - High out-of-pocket cost of and low reimbursement for vaccines and their administration
    - Misconceptions of health care professionals, patients, and parents about the severity of vaccine-preventable diseases
    - Safety of current vaccines, current vaccination recommendations, and valid precautions and contraindications to vaccination
    - Fragility of the vaccination supply
    - Missed opportunities for administering vaccines

POTENTIAL HARMS

Adverse reactions to immunization

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This information is presented as a standard-of-care rather than practice guidelines because the evidence for following these recommendations is so strong that they should be implemented with rare exceptions.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The Following Implementation Standards Apply to Children, Adolescents, and Adults

1. Vaccination services are readily available.
2. Vaccinations are coordinated with other health care services and provided in a medical home when possible.
3. Barriers to vaccination are identified and minimized.
4. Patient costs are minimized. Information about the Vaccines for Children program is available at www.cdc.gov/nip/vfc/.
5. Health care professionals routinely review the vaccination and health status of patients at every encounter to determine which vaccines are indicated.
6. Health care professionals assess for and follow only medically accepted contraindications, as specified by the Advisory Committee on Immunization Practices (ACIP). For additional information, see www.cdc.gov/nip/recs/contraindications.pdf.
7. Parents or guardians and patients are educated about the risks and benefits of vaccination in a culturally appropriate manner and in easy-to-understand language. For additional information, see www.cdc.gov/nip/vacsafe/.
8. Health care professionals follow appropriate procedures for vaccine storage and handling.
9. Up-to-date, written vaccination protocols are available at all locations where vaccines are administered.
10. Persons who administer vaccines and staff who manage or support vaccine administration are knowledgeable and receive ongoing education. A list of Centers for Disease Control and Prevention (CDC)-sponsored training and education opportunities is available from the CDC Web site.
11. Health care professionals simultaneously administer as many doses of the indicated vaccine as possible.
12. Vaccination records for patients are accurate, complete, and easily accessible.
13. Health care professionals report adverse events that occur after vaccination promptly and accurately to the Vaccine Adverse Event Reporting System (www.vaers.org) and are aware of the National Vaccine Injury Compensation Program (www.hrsa.gov/osp/vicp/).
14. All personnel who have contact with patients are appropriately vaccinated.
15. Systems are used to remind parents or guardians, patients, and health care professionals when vaccinations are due and to recall those who are overdue. Information about reminder or recall interventions can be found at www.atpm.org/immunization/whatworks.html.

16. Office- or clinic-based patient record reviews and vaccination coverage assessments are performed annually.
17. Health care professionals practice community-based approaches.
18. Standing orders for vaccinations are used in hospitals, nursing homes, and other appropriate settings.
19. Regular assessments of vaccination coverage rates are conducted in a provider´s practice.

Indicators

Health care professionals are urged to audit their patient records on a regular basis to determine whether these guidelines for immunization are being implemented. The following indicators are suggested for review: for children, receipt of the entire series of 11 vaccines by the age of 2 years and receipt of 2 doses of measles, mumps, rubella vaccine by the age of 4 to 5 years; for adults, receipt of pneumococcal vaccine for those aged $\geq$65 years and annual influenza vaccination for those aged $\geq$50 years. Receipt of these vaccines may be viewed as an indication that a given population has been immunized successfully.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Gardner P, Pickering LK, Orenstein WA, Gershon AA, Nichol KL. Guidelines for quality standards for immunization. Clin Infect Dis 2002 Sep 1;35(5):503-11. [48 references] PubMed

ADAPTATION

The guideline document is a summary of evidence-based guidelines previously developed by national organizations: Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP).

DATE RELEASED

1997 (revised 2002)

GUIDELINE DEVELOPER(S)

Infectious Diseases Society of America - Medical Specialty Society

SOURCE(S) OF FUNDING

Infectious Diseases Society of America (IDSA)

GUIDELINE COMMITTEE

Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee Members: Pierce Gardner, Larry K. Pickering, Walter A. Orenstein, Anne A. Gershon, and Kristin L. Nichol

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previously published version: Quality standards for immunization. Clin Infect Dis 1997 Oct;25(4):782-6. [15 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the Infectious Diseases Society of America (IDSA) via the Clinical Infectious Diseases journal Web site:

- HTML
- Portable Document Format (PDF)
- Postscript

Print copies: Available from Infectious Diseases Society of America, 66 Canal Center Plaza, Suite 600, Alexandria, VA 22314.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Kish MA. Guide to development of practice guidelines. Clin Infect Dis 2001 Mar 15;32(6):851-4.

  Electronic copies: Available from the Infectious Diseases Society of America (IDSA) Web site.

- Gross PA. Practice guidelines for infectious diseases: Rationale for a work in progress. Clin Infect Dis 1998 May;26(5):1037-41.

Electronic copies: Available in Portable Document Format (PDF) from the IDSA Web site.

Print copies: Available from IDSA, 66 Canal Center Plaza, Suite 600, Alexandria, VA 22314.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on January 15, 1999. The information was verified by the guideline developer as of March 22, 1999. This summary was updated by ECRI on October 10, 2002. The information was verified by the guideline developer on February 5, 2003.

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